

B3
Count

14. A packaging material, securities documents, security papers or graphic products markable by or marked with lasers, containing laser markable paper or board products according to claim 1. --

REMARKS

Status of the Claims

Claims 6 and 10 have been cancelled. New claims 11-14 have been added. Claims 1-5 and 7-9, and 11-14 are pending in the application. Claims 1-5 and 7-9 have been rewritten for better clarity and to conform with current US claim drafting practices.

The Rejection of Claim 10 Under 35 U.S.C. §112, Second Paragraph Should Be Withdrawn

Claim 10 stands rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claim 10 has been rewritten as new claims 11-14 for better clarity in proper method and product claim format delimiting how the use is actually practiced.

The Rejection of Claim 10 Under 35 U.S.C. §101 Should Be Withdrawn

Claim 10 stands rejected under 35 U.S.C. §101 for being in improper process claim format. As discussed above, claim 10 has been rewritten as new claims 11-14 for better clarity and put into proper method and product claim formats consistent with US claim drafting practices.

The Rejection of the Claims under 35 U.S.C. § 102(b) Should Be Withdrawn

Claims 1-4, 6, 9, and 10 stand rejected under §102(b) as being anticipated by DE 42 38 378A. The Examiner has posited that DE 4238378 A discloses coating a substrate such as a paper with a pigmented lacquer formulation including pearlescent pigments based on metal-oxide flakes having a particle size less than 20 microns. Also, the Examiner takes the position that the coated paper and filler are inherently laser-markable and electrically conductive.

Applicants contend that DE 42 38 378A discloses a method directed to the preparation of at least two coatings which have good hiding properties and good gloss. It can be seen from the examples that the suitable pigments include carbon black and pearlescent pigments. The

pigment volume concentration in the basecoat is 8.7% (col. 2, lines 66-67). The instant invention requires that the absorber material have a very pale neutral intrinsic color and be required only in small amounts (see specification, page 1, lines 33-37). Carbon black does not fulfill the requirement of a very pale color. Moreover, it is impossible to achieve dark markings on papers wherein the absorber is dark itself. Thus, it is submitted that all elements of the present claims are not anticipated.

Claims 1, 2, 4, and 9 stand rejected under 35 U.S.C. 102(b) as being anticipated by Yagi et al. (US 5,695,608). At page 4 of the Office Action, the Examiner has rejected the afore-mentioned claims as being anticipated by patent '608. Yet, the Examiner refers to DE 4238378 instead of US 5,695,608 in that paragraph and makes the exact same rejection as made at page 3 of the Office Action. Therefore, the Examiner fails to precisely disclose his reason(s) for rejection under the '608 patent. It is presumed this is an error in transcription. In any case, Applicants respectfully traverse this rejection for the reasons stated below.

Yagi et al. discloses a moisture-proof paper sheet comprising a moisture-proof coating layer formed on a paper sheet substrate. A coating liquid containing the platelet-shaped crystalline phyllosilicate compound particles is applied to at least one surface of the paper sheet substrate. The platelet-shaped crystalline particles are arranged in such a manner that the upper and lower flat surfaces of the particles are substantially parallel to each other and to the surface of the paper sheet. The parallel-arranged particles accumulate in a plurality of layers in the resultant coating layer (col. 6, lines 18-34). Additionally, the moisture-proof and film-forming synthetic resin (a) and the plate crystalline phyllosilicate compound particles(b) are employed preferably in a solid weight ratio of 30/70 to 70/30, more preferably 40/60 to 60/40 (col. 9, lines 1-5). More importantly, the high amount of phyllosilicates in the coating layer is too high for the laser marking of paper (col. 6, lines 38-41 wherein it is disclosed that a moisture-proof coating layer formed from a synthetic resin latex and having a thickness of, for example 200 μm can be fully attained by the moisture-proof coating layer ...having a thickness of several tens μm) and the accumulated platelet shaped phyllosilicates are not suitable for laser markings with sharp edges and a high contrast as required for proper laser marking. It is clear that a paper substrate of the sort disclosed in patent '608 would not be suitable for laser marking and could not be anticipatory to the instant invention.

The Rejection of Claims 7, 5, and 8 Under 35 U.S.C. §103 Should Be Withdrawn

Claim 7 stands rejected under 35 U.S.C. 103 (a) as being unpatentable over DE 4238378 A in view of Hosomura et al. (US 4,778,711). Applicants respectfully traverse this rejection.

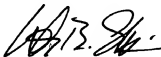
Hosomura discloses an electrophotographic image transfer paper comprised of a raw sheet of paper coated with a formulation containing pigments, adhesives and optionally dyes and color pigments. Nowhere does Hosomura disclose the use of inorganic platelet shaped pigments and color pigments as absorbers for the laser marking of paper. Therefore, it is not a tenable argument to maintain that it would have been obvious to combine the teachings of DE 4238378 with Hosomura to arrive at applicant's claimed invention.

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Yagi et al. (US 5,695,608). The Examiner takes the position that it would have been obvious to one of ordinary skill in the art to use a mixture platelet fillers given the reasonable expectation of equivalent results and absence of a showing of criticality. Applicants traverse this argument. The Examiner provides no reason as to why it would have been obvious to one of ordinary skill in the art to make such a mixture. Claim 5 is directed to an embodiment of the invention which is disclosed in the specification at page 3, lines 6-8 and as an Example (see Example 8, page 13 of the specification). There must be a suggestion or motivation to combine the platelet fillers in a mixture to arrive at applicants claimed invention. Where the prior art gives no indication of which parameters are critical and no direction to which of many possible choices is likely to be successful, the fact that the claimed combination falls within the scope of possible combinations taught therein does not render it patentably obvious. *In re O'Farrell*, (CAFC 1988) 853 F.2d 894, 7 PQ2d 1673.

Claim 8 stands rejected under 35 U.S.C. 103 (a) as being unpatentable over DE 4238378 A in view of DE 1522686 B. The Examiner argues that it would have been obvious to add light sensitive pigments as disclosed in DE 1522686 B to the coating laquer disclosed in DE 4238378 A. Applicants respectfully traverse this rejection. DE 1522686 B discloses a process for picture production by means of the use of electric light sensitive pigments consisting of 2,4-diaminotriazine. Applicants contend that these organic light sensitive pigments are not suitable as absorbers due to the fact that they decompose if treated with a laser.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "Version with Markings to Show Changes Made"..

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1-5 and 7-9 have been amended as follows:

1. (Amended) Laser-markable paper and board products, ~~characterized in that wherein~~ the paper comprises, as absorber material, an inorganic platelet-form substrate having a particle size of 1 μm to 60 μm and the amount of said absorber material is 1% to 5% by weight based on the body of the paper.

2. (Amended) The Laser-markable paper and board products according to claim 1, ~~characterized in that wherein~~ the inorganic platelet-form substrate is mica.

3. (Amended) The Laser-markable paper and board products according to claim 1, ~~characterized in that wherein~~ the inorganic platelet-form ~~inorganic~~ substrate is a pearl luster ~~luster~~ pigment.

4. (Amended) The laser-markable paper and board products according to claim 1, ~~characterized in that wherein~~ the inorganic platelet-form substrate is an electrically conductive pigment.

5. (Amended) The laser-markable paper and board products according to claim 1, ~~characterized in that wherein~~ the absorber material is a mixture of different inorganic platelet-form substrates.

7. (Amended) The laser-markable paper and board products according to claim 1, ~~characterized in that wherein~~ the paper and board products contain ~~colour~~ color pigments.

8. (Amended) The laser-markable paper and board products according to claim 1, ~~characterized in that wherein they also~~ the paper and board products contain light-sensitive pigments.

9. (Amended) A process for producing laser-markable paper and board products according to claim 1, characterized in that, during papermaking comprising stirring absorber material ~~the absorber material is stirred~~ into (the paper stock) and/or into (the coating material) during the papermaking process.

Claims 11-14 have been newly added and therefore, no marked-up version of these claims is necessary.